Claims 1, 16, 19, 29, 32, 34, 38, and 44

The office action asserts that Rom discloses "(s)imulating draping and collision of the garment with the mannequin within the simulation scene to generate a three-dimensional rendering frame of the mannequin wearing the garment (col. 3, line 63 to col. 4, line 11; col. 5, lines 3-13; abstract)." Applicant respectfully traverses this assertion, since Rom appears to teach away from simulating draping: "Thus, rather than creating a model and then attempting to drape the image of the clothing over the model . . . ." Col. 4, lines 7-9. Applicant further disputes this assertion as it appears that the cited portions of Rom relate to two-dimensional modeling and not to the generation of three-dimensional rendering frames.

The office action asserts that Rom teaches "(c)onstraining portions of the garment to reside within or outside of particular shells defined around the mannequin in the rendering frame (col. 2, lines 34-42; fig. 2)." Applicant respectfully disagrees with this assertion because the "garment adjustment points" appear to teach away from the use of shells that constrain portions of the garment in a three-dimensional rendering frame.

The office action states that Rom discloses "(g)enerating rendering frames containing mannequin or garment objects as defined by selected parameter values by shape blending corresponding objects of previously generated rendering frames (col. 7-11; col. 13, lines 55-67; col. 14, lines 1-45; fig. 4-11, 15, and 18)." It appears that the quoted citation is an error as the Rom patent has only eight columns. Clarification of the rejection is respectfully requested in a nonfinal communication from the Office, or withdrawal of the rejection is desired. Applicant finds no discussion in Rom relating to shape blending objects of previously generated rendering frames.

The office action references Volino pages 42, 44, and 48, however, those pages relate to a "2D design interface." Thus, it appears that Volino teaches away from a three dimensional approach, and that the combination of Rom and Volino fails to provide the recited subject matter.

The office action further states that Sakaguchi (but neither Rom nor Volino) specifically teaches "generating rendering frames containing mannequin or garment objects as defined by selected parameter values by shape blending corresponding objects of previously generated rendering frames (page 31-second paragraph to page 33)." Applicant respectfully submits that

this is inconsistent with the previously quoted statement in the office action regarding the teachings of Rom. Applicant respectfully submits that the cited portions of Sakaguchi fail to teach generating rendering frames by shape blending objects of previously generated rendering frames. The cited portions of Sakaguchi appear to deal only with modifying the shape of an object, in contrast to shape blending as recited in the claims.

Applicant does not believe that the combined teachings of Rom, Volvino, and Sakaguchi render obvious any of claims 1, 16, 19, 29, 32, 34, 38, or 44. Among other things, applicant is unable to find in the cited references a teaching or suggestion for: 1) a method that includes simulating draping and collision of a garment with a mannequin within a three-dimensional simulation scene to generate a three-dimensional rendering frame of the mannequin wearing the garment, wherein portions of the garment are constrained to reside within or outside of particular shells defined around the mannequin in the rendering frame, as recited by claims 1 and 19; 2) a method that includes simulating draping and collision of a garment with a mannequin within a three-dimensional simulation scene to generate a three-dimensional rendering frame of the mannequin wearing the garment, and generating rendering frames containing mannequin or garment objects as defined by selected parameter values by shape blending corresponding objects of previously generated rendering frames, as recited by claim 16; 3) a system that includes a three-dimensional modeling environment for generating objects corresponding to a representative mannequin and a garment placed in a simulation scene and for simulating draping and collision of the garment with the mannequin within the simulation scene to generate a three-dimensional rendering frame of the mannequin wearing the garment, and means for constraining portions of the garment to reside within or outside of particular shells defined around the mannequin in the rendering frame, as recited by claims 29 and 38; 4) a system that includes a three-dimensional modeling environment for generating objects corresponding to a representative mannequin and a garment placed in a simulation scene and for simulating draping and collision of the garment with the mannequin within the simulation scene to generate a three-dimensional rendering frame of the mannequin wearing the garment, and means for generating a rendering frame containing mannequin or garment objects as defined by selected parameter values by shape blending corresponding objects of previously generated rendering frames, as recited by claim 32; 5) a

system that includes a repository containing a plurality of two-dimensional garment images and mannequin images as defined by specific parameters, and a compositing rule interpreter for displaying the two-dimensional images of user-selected garments and of a selected mannequin in a layered order dictated by compositing rules, as recited by claim 34; or 6) a system that includes a repository containing a plurality of two-dimensional garment images and mannequin images as defined by specific parameters, wherein the images contained in the repository are created by rendering an image from a three-dimensional simulation scene containing a mannequin wearing the garment, and means for displaying the two-dimensional images of user-selected garments and of a selected mannequin in a layered order determined from depth information contained in the simulation scene, as recited by claim 44. Reconsideration and withdrawal of the rejections is respectfully requested.

Claims 2, 35, and 43

With respect to claims 2, 35, and 43, the office action states that "Rom discloses the rendered image is used to form a visual image on a computer display device (col. 6, lines 13-19; fig. 2)." As explained above, however, Rom does not disclose rendering an image from a three-dimensional representation such as a rendering frame as that term is used in the specification. Applicant finds no teaching or suggestion in the cited references for rendering images from rendering frames as recited in the claims. Reconsideration and withdrawal of the rejections is respectfully requested.

Claims 5, 23, 42, and 45

With respect to claims 5, 23, 42, and 45, the office action states that "Rom discloses the two-dimensional images are rendered from a rendering frame using a plurality of camera positions (col. 6, lines 33-45)." As explained above, however, it is respectfully asserted that Rom does not disclose rendering an image from a three-dimensional representation such as a rendering frame. It is respectfully submitted that Rom further does not disclose rendering such an image from a rendering frame using a plurality of camera positions (i.e., viewpoints) as recited

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in claims 5, 23, 42, and 45. Reconsideration and withdrawal of the rejections is respectfully requested.

Claims 10-12 and 39

With respect to claims 10-12 and 39, the office action states that "Sakaguchi discloses the separate rendering frames are combined into a composite two-dimensional image using Z-coordinates of the objects (page 66 to 68)." Among other things, Applicant finds no teaching or suggestion in Sakaguchi or the other cited references for combining separate rendering frames into a composite two-dimensional image using Z-coordinates of the objects, as recited in claim 10. Among other things, Applicant finds no teaching or suggestion in Sakaguchi or the other cited references for rendering the garments contained in the separate rendering frames into separate two-dimensional garment images that are layered upon a two dimensional rendering of the mannequin to create a composite two-dimensional image, as recited by claim 11, or for layering the separate two-dimensional images on a two-dimensional image of the mannequin in accordance with a compositing rule that defines in what order specific garment images should be layered to thereby generate a composite two-dimensional image of the mannequin wearing the garments as recited by claim 12. With respect to claim 39, applicant contends that the recitation of that claim is a further limitation to the patentable subject matter recited by claim 38 and is neither taught nor suggested by the cited references in that context. Reconsideration and withdrawal of the rejections is respectfully requested.

Claims 14-15

With respect to claims 14-15, the office action states that "Sakaguchi discloses a network and a processor-executable instructions (fig. 13)." Applicant contends that the recitations of claims 14 and 15 are further limitations to the patentable subject matter recited by claim 1 and are neither taught nor suggested by the cited references in that context. Reconsideration and withdrawal of the rejections is respectfully requested.

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Claims 3-4, 6-9, 13, 17-18, 20-22, 24-28, 30-31, 33, 36, and 40-41

The office action contains no specific comments directed toward claims 3-4, 6-9, 13, 17-18, 20-22, 24-28, 30-31, 33, 36, and 40-41, stating that those claims analyzed as discussed with respect to claims 1, 16, 19, 29, 32, 34, 38, and 44. Applicant reiterates the remarks made above with respect to those latter claims and asserts that the recitations of claims 3-4, 6-9, 13, 17-18, 20-22, 24-28, 30-31, 33, 36, and 40-41 are further limitations to the patentable subject matter recited by claims 1, 16, 19, 29, 32, 34, 38, or 44 and are neither taught nor suggested by the cited references in those contexts. Reconsideration and withdrawal of the rejections is respectfully requested.

Timely Traversal of Assertions of Things Known to One of Skill in the Art

Applicant generally traverses the assertion of things "known to one of skill in the art" as a form of Official Notice and requests a reference to support such assertions pursuant to MPEP 2144.03, or their withdrawal in the next official communication.

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CONCLUSION

In view of the foregoing remarks, Applicant believes the claims are in condition for allowance and respectfully requests such action. Please charge any fees deemed necessary to Deposit Account 19-0743. The Examiner is invited to telephone the below-signed attorney at 612-373-6912 to discuss any questions which may remain with respect to the present application.

Respectfully submitted,
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By their Representatives,

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Date _Nov. 18, 2002_   By _____
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